manual.pdf

Tool: Configuration Performance Prediction using Ridge Regression

This tool predicts system performance from configuration inputs using WEKA's Ridge Regression implementation.

Project Directory Overview

- Java Source Code: `src/main/java/uk/ac/bham/configPerformance/`
- Input CSV Dataset(s): `src/datasets/`
- Output Prediction Results: `src/result/`

Run Instructions

Option 1: Maven-based Execution

1. Compile the project:

```
mvn clean compile
```

2. Run the main class:

```
mvn exec:java -Dexec.mainClass="uk.ac.bham.configPerformance.ConfPerfLearningMain"
```

Option 2: Manual Execution

1. Download the required JAR file:
    - commons-math3-3.6.1.jar
2. Save to: `lib/commons-math3-3.6.1.jar`
3. Compile the source code:

```
javac -cp lib/commons-math3-3.6.1.jar -d bin
src/main/java/uk/ac/bham/configPerformance/*.java
```

4. Run the main program:

```
java -cp lib/commons-math3-3.6.1.jar:bin
uk.ac.bham.configPerformance.ConfPerfLearningMain
```

> Use `;` instead of `:` for classpath on Windows.

Input Format

- **File location:** `src/datasets/**/*.csv` (multiple training datasets may exist)
- **Format:** Comma-separated values (CSV)

Output Format

- **File generated:** `src/result/results.csv`

Main Class

To run the program manually or through Maven, use:

```
uk.ac.bham.configPerformance.ConfPerfLearningMain
```

This is the entry point for executing Ridge Regression on configuration data.